

REBUTTAL TO HJ-10

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*The key to science:
If your prediction is wrong,
Your hypothesis is wrong.*

Conclusions

The Legislature must reject HJ-10 because it is based upon the false premise - *that climate science is settled* - that has been rejected by the Montana Supreme Court.

The Legislature also must reject HJ-10 because it is totally wrong about climate science, makes significant logical and scientific errors, and proposes RESOLUTIONS that would reduce climate science to a government-dictated catechism to be memorized and obeyed and legalize and promote indoctrination and brainwashing in our schools and universities.

Part 1. Two key reasons to reject HJ-10

WHEREAS #1 States:

WHEREAS, scientific data reported by climatologists from the United States and numerous other nations in the Intergovernmental Panel on Climate Change and the United States National Oceanic and Atmospheric Administration **unequivocally** shows that anthropogenic or human-made climate change is factually documented and supported by **overwhelming** scientific evidence; and

A. Rebuttal based on Legal Issues

HJ-10 claims climate science is "*settled*" but it has no scientific evidence to support its claims.

By contrast, thousands of atmospheric scientists have shown conclusively in peer-reviewed publications that human carbon dioxide emissions are not dangerous. (See Exhibits C and D referenced on the next page.)

HJ-10 conflicts with the decisions of the Montana Supreme Court and Governor Steve Bullock (when AG) who ruled that, for Montana at least, **climate science is not settled** and such a claim is legally invalid until climate science facts are resolved in a Montana court.

The Montana Supreme Court rejected the "science is settled" claim on June 15, 2011.

Ref: <http://climatephysics.com/category/barhaugh-v-montana/>

Summary of the Legal Issue

On May 4, 2011, *Our Children's Trust of Oregon*, filed the Petition "*Barhaugh v Montana*" in the Montana Supreme Court' which states in part:

The State admits "scientific consensus [exists] that increasing emissions of greenhouse gases are affecting the Earth's climate."

the State acknowledges "[s]cientists know with virtual certainty" human activities are affecting the composition of the atmosphere by releasing large quantities of CO2 ...

On June 4, 2011, *Climate Physics LLC and its Intervenor*s filed an Intervention, opposing the Petition, which states in part:

In a 321-page report ... the skeptical views of over 1,000 international scientists, including many current and former IPCC scientists, who have now turned against the IPCC ... have now challenged man-made global warming claims made by the United Nations Intergovernmental Panel on Climate Change ("IPCC"). (Exhibit C.)

In 2008, the Nongovernmental International Panel on Climate Change ... report falsifies the principal IPCC conclusion that the reported warming (since 1979) is very likely caused by the human emission of greenhouse gases. *In other words, increasing carbon dioxide is not responsible for current warming.* (Exhibit D.)

The authors cite thousands of peer-reviewed research papers and books that were ignored by the IPCC, plus additional scientific research that became available after the IPCC's self-imposed deadline of May 2006.

On June 6, 2011, then Attorney General Steve Bullock filed the State of Montana's Summary Response, which states in part:

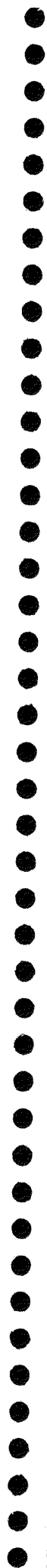
The petition here should be rejected because the claims ... involve fact-intensive questions ... it would need to address, among other issues, the current state of climate change science ... the Petition for Original Jurisdiction should be denied.

On June 15, 2011, the Montana Supreme Court ruling states in part:

We conclude this case does not involve purely legal questions. **This Court is ill equipped to resolve the factual assertions presented by Petitioners.** ... Petitioners have not established ... factors that would preclude litigation in a trial court...

IT IS ORDERED that the Petition for Original Jurisdiction IS DENIED and DISMISSED.

Therefore, the Montana Legislature must reject HJ-10 because its claims conflict with the decision of the Montana Supreme Court.



B. Rebuttal based on Science Issues

HJ-10 has no scientific hypothesis, yet it makes a claim that requires a scientific hypothesis.

To be scientific, WHEREAS #1 must state a scientific hypothesis. Therefore, we will state the necessary hypothesis. The Dangerous Anthropogenic Global Warming (DAGW) hypothesis is:

"Human carbon dioxide emissions will cause dangerous global warming."

The many scientific details that make up this hypothesis are included in climate models, and these models make predictions that can be tested. If a climate model prediction fails to predict new data, even once, then DAGW hypothesis fails. These are the rules of the scientific method.

There is another important hypothesis, the *Null Hypothesis*, that we will talk about in Part 2.

To be "settled", the DAGW hypothesis must survive many tests. This has not happened. Therefore, climate science is not settled.

Let's review where both sides agree.

The IPCC and atmospheric scientists on both sides of the global warming debate agree on the following definitions and calculations:

1. Doubling CO2 must cause at least 3C of warming to be considered *dangerous*.
2. But doubling CO2, without positive feedbacks, will add only 1C to greenhouse warming.

Therefore, lacking proven positive feedbacks, the DAGW hypothesis fails out of the gates. This does not prove there is no AGW but only that it is not *dangerous*.

To compensate for this failure to be *dangerous*, the IPCC climate models include the following two assumed positive feedbacks to force the theoretical doubling of CO2 to cause warming greater than 3C.

Even the IPCC considers these assumed positive feedbacks uncertain, which means even the IPCC is *uncertain* about DAGW. These assumed feedbacks are:

1. Climate models assume warming by increased carbon dioxide **will increase atmospheric water vapor** and thereby add to greenhouse warming, a positive feedback.
2. Climate models assume warming by increased carbon dioxide **will decrease cloud cover** and thereby increase solar heating of the earth's surface, a positive feedback.

Therefore, DAGW promoters, like HJ-10 Sponsor Rep Doug Coffin, must show:

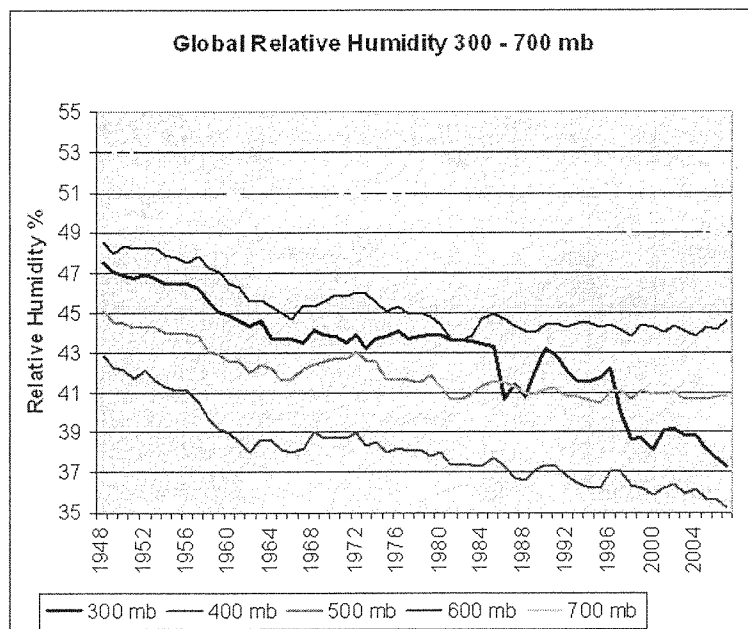
1. Added carbon dioxide increases atmospheric water vapor.
2. Added carbon dioxide decreases cloud cover.

To date, after \$100 billion of government research funding, no one has shown convincing evidence that these two assumptions are valid.



DAGW fails its first test

Assumption #1 fails immediately because data that show atmospheric water vapor has decreased while carbon dioxide has increased. See Fig 1.

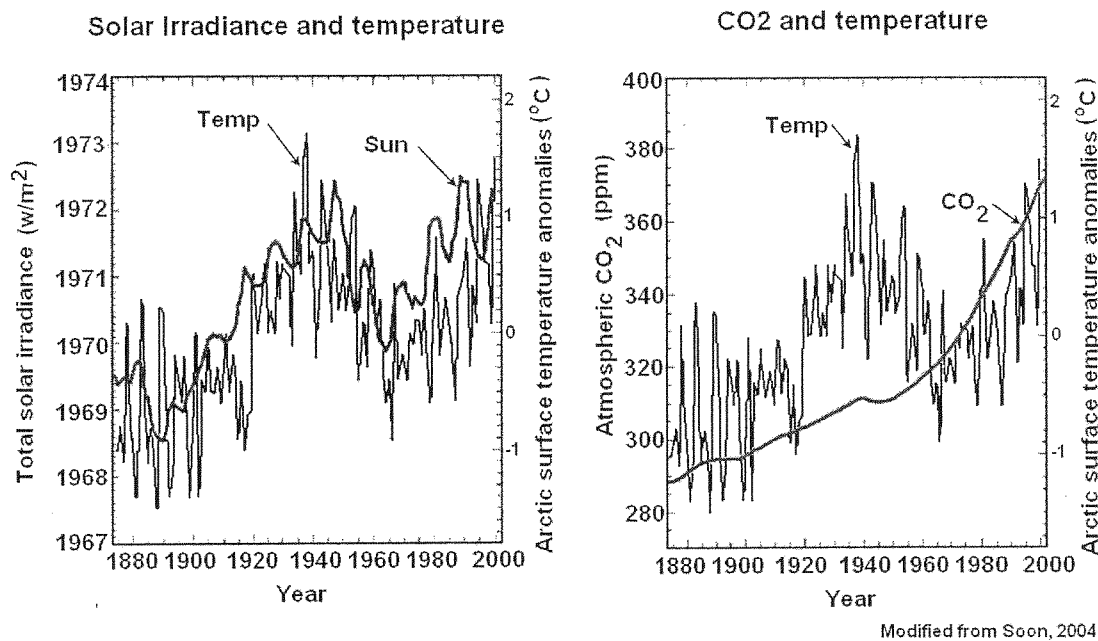


This is sufficient to invalidate the climate models and the DAGW hypothesis. Case closed, if we wish to stop here. But DAGW proponents won't stop here, so we continue.

Appendix 2 shows five more failures of the DAGW Hypothesis

This shows the Sun has a stronger effect than CO2

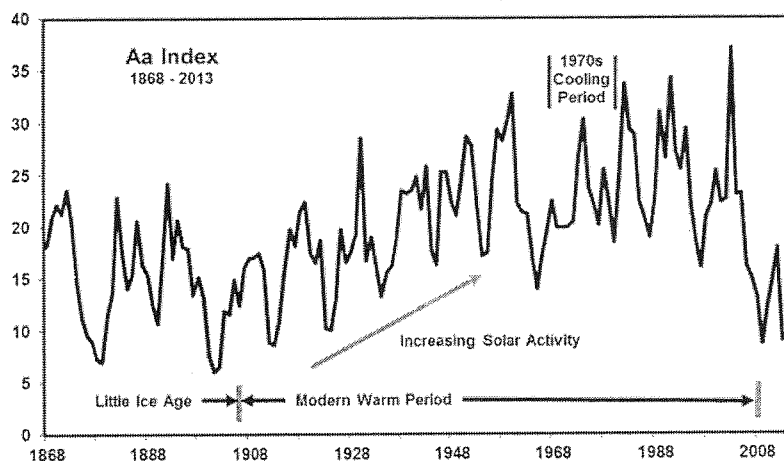
Global temperature has followed Total Solar Irradiance very well but not CO2, which does not even correlate. These charts contradict HJ-10's claims.



Let's look at where our climate may be headed

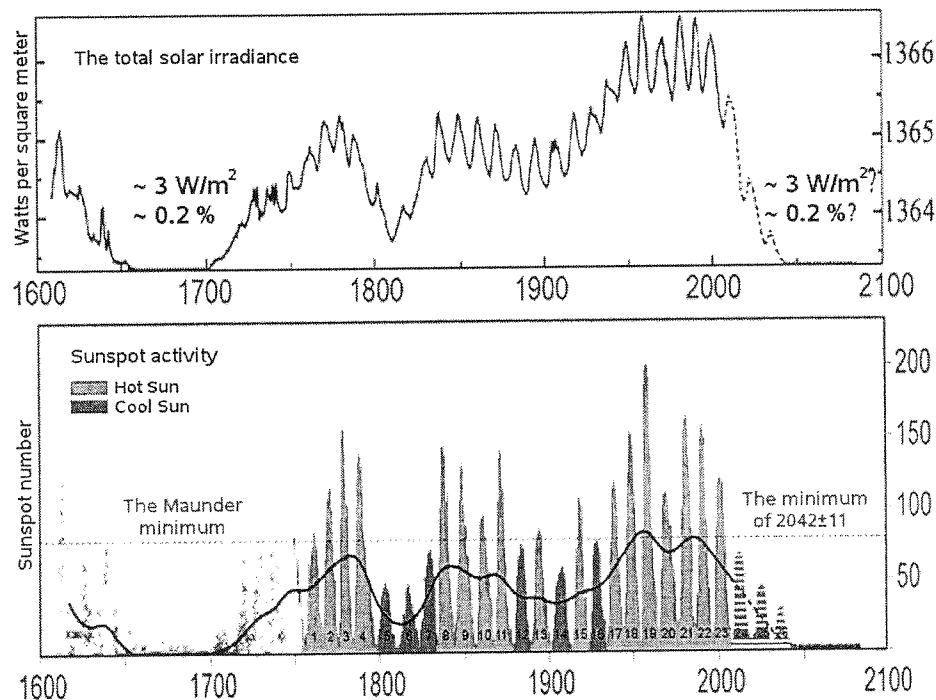
Here are some predictions that have wide support among climate physicists. These predictions show climate science is far from settled and how HJ-10 would be a disaster to science.

This record of Solar Activity shows a clear relationship to the Earth's global temperature from 1868 to present. The index was low during the Little Ice Age and rose before the climate began to recover from the Little Ice Age to bring us our more pleasant climate.



This index explains the 1970's cooling which carbon dioxide cannot and it has dropped significantly since it peak about 2004.

This chart by Dr. Habibullo Abdussamatov, Head of Space research laboratory of the Pulkovo Observatory, Head of the Russian/Ukrainian joint project Astrometria, predicts the Earth is now entering a period of significant cooling that will lead us into another "Little Ice Age".



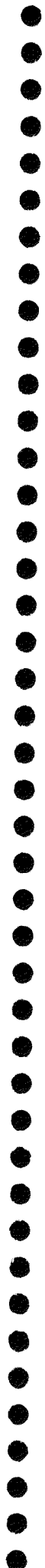
Conclusion to Part 1

We are not saying humans have no effect on climate. We are saying the human effect is not significant enough to justify government intervention.

We are also saying it is vital to America and Montana to make our climate science free to be a true science. HJ-10 will stop climate science progress and put in its place a monstrous, government-controlled, global warming religion.

The most recent science concludes that doubling CO2 will cause from 0.5 to 1.0 Celsius increase in global temperature but natural cycles overwhelm this human effect.

Natural cycles indicate the Earth will enter a significant cooling for the next 40 to 60 years. This is not the time to be concerned about our CO2 emissions. We need to build reliable, low-cost energy sources so we can to prepare for any eventually, including global cooling.



Part 2. The WHEREAS's #2 - 14 fail science and common sense.

That most WHEREAS's are simply incorrect is beside the point. The point is they have nothing to do with making a decision about DAGW. WHEREAS's 2 through 14 are irrelevant to DAGW for 3 key reasons:

1. They omit the Null Hypothesis

Saying climate changes proves nothing. Climate always changes. That is not the issue. DAGW proponents must show that CO₂ caused climate to do something that it would not have done without the CO₂.

All good science requires a Null Hypothesis to be tested. According to Occam's Razor, the Null Hypothesis must be the simplest formulation available. The Null Hypothesis for AGW is:

Global climate changes are presumed to be natural, unless and until specific evidence shows human causation.

The first requirement a DAGW proponent must meet is to show a signal of DAGW that falls outside the bounds of normal climate and weather variations.

Put in legal terms, DAGW proponents must show that "but for our CO₂" the climate would not have performed a specified event. Proponents have tried to find such an event without success.

As an example, let's look at WHEREAS #2:

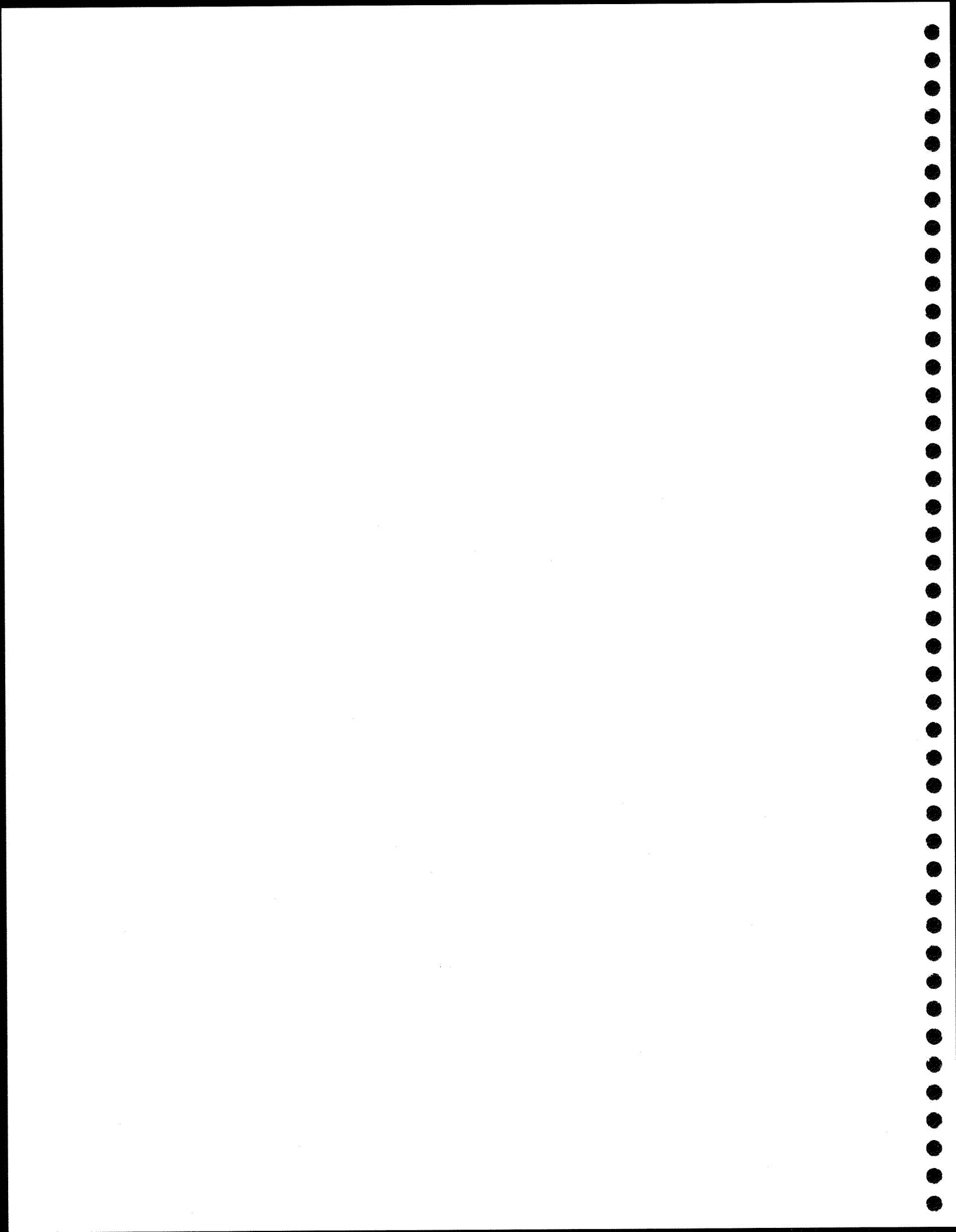
data shows that the mean global temperature has increased by 1 degree C in the last 100 years, and the 50-year rate of change has doubled;

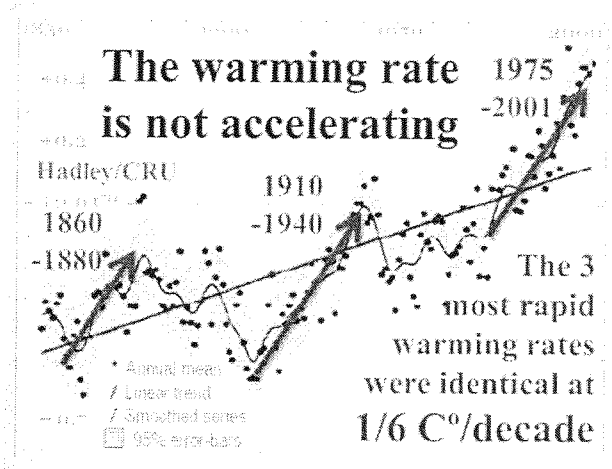
First, we will correct the data as follows:

Data show mean global temperature increased by 0.4C to 0.7C in the last century. The 50-year rate of change has not doubled. The maximum rate of about 1.7° C/century occurred 3 separate times: 1860-1880, 1910-1940, and 1975-2001.

Second, we note the most recent rapid rise was preceded by 2 similar rapid rises. Therefore, WHEREAS #2 does not falsify the Null Hypothesis. Rather, it is meaningless to DAGW.

Third, the 3 rates are identical and only the last occurred when carbon dioxide was increasing. Therefore, this strongly suggests nature, not carbon dioxide, caused the rapid rises and that the DAGW Hypothesis fails.





2. The WHEREAS's use the logical fallacy known as "affirming the consequent".

Let's look at WHEREAS #2 again. The implied argument goes like this:

If our carbon dioxide causes AGW, then global temperature will rise.

Global temperature went up. Therefore, our carbon dioxide causes AGW.

Here is an example of this argument:

If I get appendicitis, I will get a stomach ache.

I have a stomach ache. Therefore, I have appendicitis.

Here is another example:

If Bill Gates owns Fort Knox, Then Bill Gates is rich.

Bill Gates is rich. Therefore, Bill Gates owns Fort Knox.

The error is that there can be more than one cause of an event and this line of fallacious reasoning only focuses on one possible cause at the exclusion of others. This logical error is also known as the "argument of ignorance". Every WHEREAS from 2 to 14, uses this false logic.

The rule in symbolic logic is:

If $A \rightarrow B$, then $B \text{ does not } \rightarrow A$ (true)

Whereas HJ-10 is using the false logic of:

If $A \rightarrow B$, then $B \rightarrow A$ (false)

In other words, WHEREAS's 2 to 14 prove nothing. They should have been omitted.



Part 3: Rebuttal to the Resolutions

The proposed RESOLUTIONS, which begin with:

"The 63rd Legislature recognizes that anthropogenic or human-made climate change is scientifically valid and represents scientific fact,"

have no scientific basis, are clearly wrong, and would cause more harm to the State of Montana and its schools, colleges and universities, than all the alleged harm due to increased CO2.

RESOLUTION A.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That the 63rd Legislature:

A (1): recognizes that anthropogenic or human-made climate change is scientifically valid and represents scientific fact;

A (2): understands that anthropogenic climate change, manifesting as major changes in weather patterns in North America, including Montana, has the potential to cause major socioeconomic and demographic dislocations in Montana that can be construed as an ecological threat;

A (3): compels state government and its affiliated agencies, with due consideration of Montana's economic heritage and preservation of employment traditions, to employ, invent, and apply new technologies commensurate with the conservation of resources in a manner that mitigates and adapts to climate change to the best of our ability; and

A (4): suggests that educators include anthropogenic climate change science in their science education curricula.

Rebuttal

- (1) Climate change science is not "settled", neither legally in Montana nor scientifically.
- (2) There is not an hypothesis about how human CO2 emissions change major weather patterns. The claim of "potential" effects is pseudo science and insanity.
- (3) There is nothing wrong with adapting to climate change. That is really our best choice. But to suggest we can "mitigate" something for which we have no valid hypothesis is scientifically irrational. Before we can "mitigate" climate, we must first be able to predict climate without and without "mitigation."

(4) To suggest that educators include anthropogenic climate change science in their science education curricula based upon HJ-10 is irrational. HJ-10 is the exact opposite platform we need in our schools.

HJ-10 dictates a belief in climate science that not only is incorrect but also rejects rational logic and the scientific method. Our education curricula should include the proper teaching of the scientific method, encourage skepticism, exclude brainwashing, and not repeat the mistakes of Lysenkoism. We must reject HJ-10.

RESOLUTION B.

BE IT FURTHER RESOLVED, that the Secretary of State send copies of this resolution to the President of the United States, the Montana Congressional Delegation, the Majority Leader of the United States Senate, the Speaker of the United States House of Representatives, the Secretary of the United States Department of Energy, the administrator of the United States Environmental Protection Agency, the Governor of the State of Montana, the Commissioner of Higher Education, the Montana Board of Education, and the Office of Public Instruction.

Rebuttal

Approving and sending HJ-10 to the President and other national leaders would only prove to them that Montana has plugged its minds into the Mother Ship and is now ready to obey its every command, including giving them our guns.

RESOLUTION C.

BE IT FURTHER RESOLVED, that the Secretary of State, in coordination with the University System and all state agencies, be encouraged to promote this resolution by encouraging the University System and state agencies to provide copies of this resolution to University System employees, state employees, and Montana university students.

Rebuttal

By contrast, what we should do is to send all these people a copy of our Legislature's decision to reject HJ-10, stating the reasons for rejection, and a warning that the claims will not be promoted by any employee of the State of Montana, its colleges and its university.

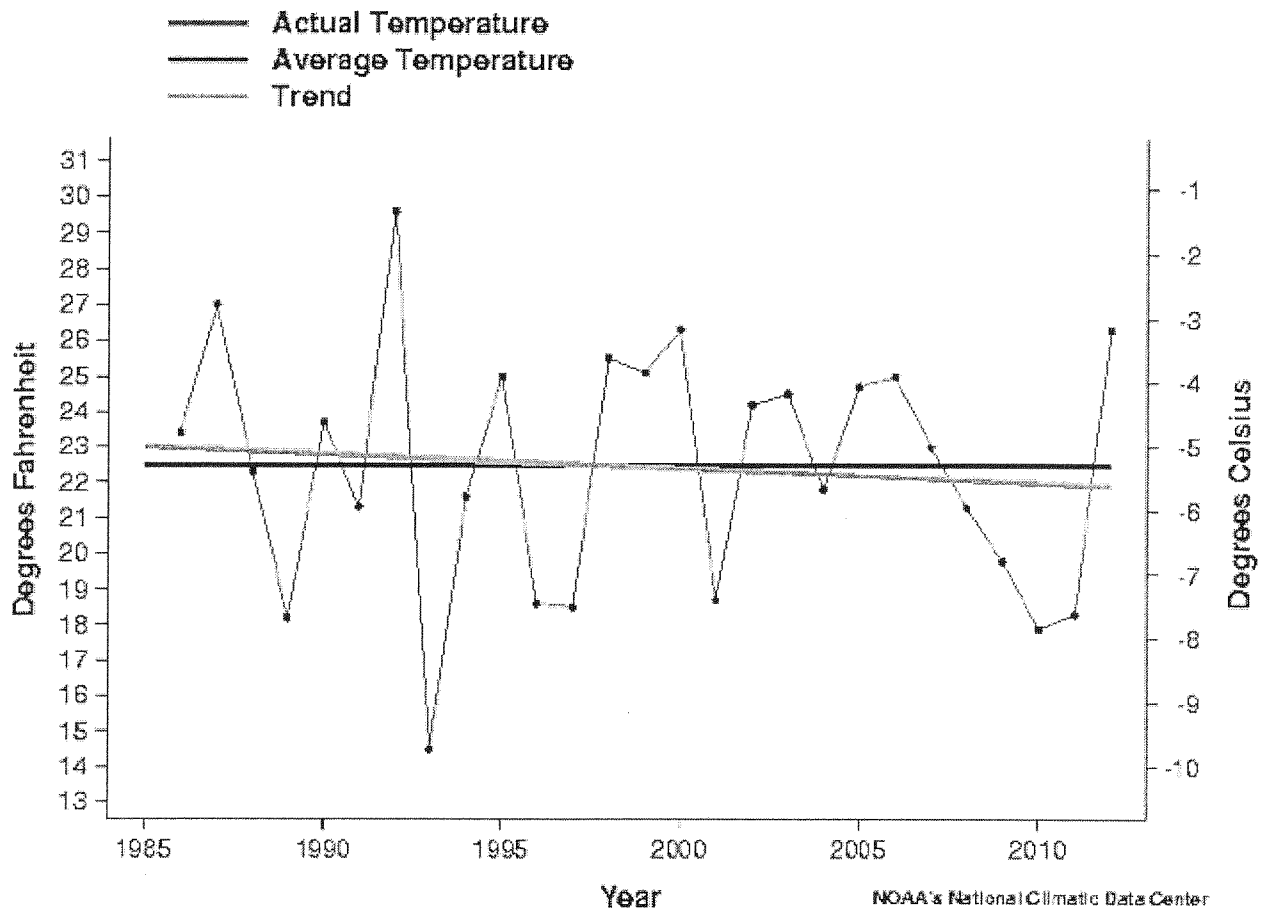
The resolution that we send these people must be that we do not accept a government-enforced religion about climate or anything else.

Furthermore, we must remove the HJ-10-type unscientific cancer from our university system and return to teaching the scientific method where skepticism is encouraged and where students are taught HOW to think rather than WHAT to think.



Appendix 1. Montana temperature record

Montana winter (Dec-Feb) temperature record from NOAA NCDC shows temperatures have been trending down since 1985 at the rate of -0.38 degF / Decade





Appendix 2. Five more failures of the DAGW Hypothesis

Test #1. Since 1997, global average temperature measured by both thermometers and satellite sensors, has displayed no statistically significant warming while CO₂ has increased by 10%.

Result: Increases in carbon dioxide have therefore not only failed to produce dangerous warming, but failed to produce any warming at all. The predictions diverge significantly from the data. **Hypothesis fails.**

Test #2. During the 20th century, global warming was between 0.4 C and 0.7 C. A maximum rate of about 1.7 C/century occurred 3 times during the century. By comparison, climate records show that over the last 10,000 years natural climate cycling has resulted in temperature more than 1 C warmer than today, and warming rates of up to 2.5 C/century.

Result: Both the rate and magnitude of 20th century warming falls well within the envelope of natural climate change. **Hypothesis fails, twice.**

Test #3. Cause must precede effect. If the AGW hypothesis is correct, then changes in carbon dioxide must precede changes in temperature.

Result: The opposite relationship applies at all time scales. Temperature change precedes carbon dioxide change by about 5 months during the annual seasonal cycle, and by about 700-1000 years during ice age climatic cycling. **Hypothesis fails.**

Test #4. The IPCC's computer general circulation models, which include the effect of increasing carbon dioxide, project that global warming should be occurring at a rate of +2.0 C/century.

Result: No warming at all has occurred in either the atmosphere or the ocean for more than the last decade. The models are clearly faulty, and allocate too great a warming effect for the extra carbon dioxide. They overestimate the climate sensitivity. **Hypothesis fails.**

Test #5. The same computer models predict that a fingerprint of greenhouse-gas-induced warming will be the creation of an atmospheric hot spot at heights of 8-10 km in equatorial regions, and enhanced warming also near both poles.

Result: Direct measurements by weather balloon radiosondes and satellite sensors show the absence of surface warming in Antarctica, and a complete absence of the predicted low latitude atmospheric hot spot. **Hypothesis fails, twice.**



Appendix 3. HOUSE JOINT RESOLUTION NO. 10

INTRODUCED BY D. COFFIN

A Joint Resolution of the Senate and the House of Representatives of the State of Montana stating that Climate Change is Scientifically Valid and Represents an Ecological Threat.

1. **WHEREAS**, scientific data reported by climatologists from the United States and numerous other nations in the Intergovernmental Panel on Climate Change and the United States National Oceanic and Atmospheric Administration **unequivocally** shows that anthropogenic or human-made climate change is factually documented and supported by **overwhelming** scientific evidence; and
2. **WHEREAS**, data shows that the mean global temperature has increased by 1 degree C in the last 100 years, and the 50-year rate of change has doubled; and
3. **WHEREAS**, 7 of the 8 warmest years on record have occurred in the last 12 years, and the 10 warmest years on record have occurred since 1995; and
4. **WHEREAS**, ocean heat levels are at a record high, and sea levels have increased by 20 centimeters since 1900 and they are projected to increase by another 40 centimeters this century; and
5. **WHEREAS**, the oceans have absorbed enough carbon dioxide within the last 100 years to lower their pH from 8.25 to 8.13, and a similar acidification is happening to soil; and
6. **WHEREAS**, the data shows that the rate of polar ice melting is accelerating, and estimates suggest that the Arctic mass has decreased by 23% over the last 100 years; and
7. **WHEREAS**, the Northwest Passage between the Atlantic and Pacific Oceans may be open throughout the entire year in just 10 years; and
8. **WHEREAS**, nations are already making claims on the new territories, including oil and mineral leases in the new Arctic Ocean; and
9. **WHEREAS**, Antarctic ice is melting twice as fast as previously estimated, with a 2.4 degree C temperature increase since 1950; and
10. **WHEREAS**, the data shows that 10 of the highest named storm seasons in the Atlantic Ocean have occurred in the last 15 years; and

11. **WHEREAS**, the United States land surface temperature has increased 1.5 to 2 degrees C in the last 100 years, and 2012 will be the hottest year ever for the lower 48 states; and
12. **WHEREAS**, November 2012 was the 36th consecutive warmer-than-average November, the 333rd straight month of increasing monthly average temperatures, with ten of the warmest Novembers occurring in the last twelve years, and July 2012 was the warmest July ever; and
13. **WHEREAS**, the increasing concentrations and increasing free energy content of climate change gases in the atmosphere correlate with increasing anthropogenic or human-made activities, including extraction and burning of solid or liquid carbon as potential energy with a subsequent transformation into atmospheric gases as kinetic energy in the atmosphere; and
14. **WHEREAS**, the data clearly shows that the combination of increased land surface, atmospheric and ocean temperatures, rising sea levels, and increased energy in storms all correlate with increased concentrations of climate change gases in the atmosphere that result from human activities.

A. NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That the 63rd Legislature:

- (1) recognizes that anthropogenic or human-made climate change is scientifically valid and represents scientific fact;
- (2) understands that anthropogenic climate change, manifesting as major changes in weather patterns in North America, including Montana, has the potential to cause major socioeconomic and demographic dislocations in Montana that can be construed as an ecological threat;
- (3) compels state government and its affiliated agencies, with due consideration of Montana's economic heritage and preservation of employment traditions, to employ, invent, and apply new technologies commensurate with the conservation of resources in a manner that mitigates and adapts to climate change to the best of our ability; and
- (4) suggests that educators include anthropogenic climate change science in their science education curricula.



B. BE IT FURTHER RESOLVED, that the Secretary of State send copies of this resolution to the President of the United States, the Montana Congressional Delegation, the Majority Leader of the United States Senate, the Speaker of the United States House of Representatives, the Secretary of the United States Department of Energy, the administrator of the United States Environmental Protection Agency, the Governor of the State of Montana, the Commissioner of Higher Education, the Montana Board of Education, and the Office of Public Instruction.

C. BE IT FURTHER RESOLVED, that the Secretary of State, in coordination with the University System and all state agencies, be encouraged to promote this resolution by encouraging the University System and state agencies to provide copies of this resolution to University System employees, state employees, and Montana university students.

